## IN THE CLAIMS

Please cancel claim 16, and further amend the claims as indicated below.

- 1. (previously presented) A method comprising:
- (a) receiving a measured electrical signal response in at least one of time domain or frequency domain, wherein the measured electrical signal response represents an electrical behavior of an electronic device;
- (b) sampling the received measured electrical signal response at a plurality of sampling points and approximating each section of the received measured electrical signal response between two adjacent sampling points by a respective linear curve section;
- (c) for each section of the received measured electrical signal response between two adjacent sampling points:
  - (i) selecting a pulse unit for generating a pulse having a transition between the two adjacent sampling points associated with the section; and
  - (ii) selecting a current source or a voltage source providing, in response to the pulse from the selected pulse unit, an output signal corresponding to a slope of the section;
- (d) selecting an integrating unit for superimposing the output signals from each of the selected current or voltage sources for generating an approximated signal response; and
- (e) creating a model of the electronic device based on the selected pulse units, the selected current or voltage sources and the selected integrating unit.
- 2. (previously presented) The method of claim 1, wherein the measured electrical signal response comprises a signal selected from the group consisting of:
  - a measured signal response to a predetermined electrical signal provided as a stimulus signal to the electronic device, and
  - a response to a step signal so that the measured signal response comprises a step response.
- 3. (previously presented) The method of claim 1, wherein the measured electrical signal response is sampled in the time domain.
  - 4. (canceled)
  - 5. (canceled)

- 6. (previously presented) The method of claim 1, further comprising: calculating a ideal step response from a measured real step signal having a finite slew rate and from the measured electrical signal response to the measured real step signal.
- 7. (previously presented) The method of claim 6, wherein the ideal step response is calculated by a technique selected from the group consisting of a Fourier Transformation and a Fast Fourier Transformation.
- 8. (previously presented) The method of claim 1, wherein the model of the electronic device is generated by a system selected from the group consisting of a simulation system and a SPICE simulation system.
- 9. (previously presented) The method of claim 1, wherein the electronic device is selected from the group consisting of: a linear device, a time-invariant device, an electrical device, a signal path, a high-speed signal path, a line drive output, a line drive output of an automated test equipment, and an n-port network.
- 10. (previously presented) The method of claim 1, wherein the measured electrical signal response of the electronic device is a measurement selected from the group consisting of a time domain reflection measurement and a time domain transmission measurement.
  - 11. (previously presented) The method of claim 1, further comprising:
    measuring the signal response of the electronic device in at least one of the time domain and the frequency domain.
  - 12. (canceled)
- 13. (previously presented) A computer readable storage media containing executable computer program instructions which when executed cause a processing system to perform a method comprising:
  - (a) receiving a measured electrical signal response in at least one of time domain or frequency domain, wherein the measured electrical signal response represents an electrical behavior of an electronic device;
  - (b) sampling the received measured electrical signal response at a plurality of sampling points and approximating each section of the received measured electrical signal response between two adjacent sampling points by a respective linear curve section;

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- (c) for each section the received measured electrical signal response between two adjacent sampling points:
  - (i) selecting a pulse unit for generating a pulse having a transition between the two adjacent sampling points associated with the section; and
  - (ii) selecting a current source or a voltage source providing, in response to the pulse from the selected pulse unit, an output signal corresponding to a slope of the section;
- (d) selecting an integrating unit for superimposing the output signals from each of the selected current or voltage sources for generating an approximated signal response; and
- (e) creating a model of the electronic device based on the selected pulse units, the selected current or voltage sources and the selected integrating unit.

## 14. (canceled)

- 15. (currently amended) A system, comprising:
- (I) a receiver for receiving a measured electrical signal response in at least one of time domain or frequency domain, wherein the measured electrical signal response represents an electrical behavior of an electronic device, and;
- (II) a modeling unit for:
  - (a) sampling the received measured electrical signal response at a plurality of sampling points and approximating each section of the received signal response between two adjacent sampling points by a respective linear curve section;
  - (b) for each section of the received measured electrical signal response between two adjacent sampling points:
    - (i) selecting a pulse unit for generating a pulse having a transition between the two adjacent sampling points associated with the section; and
    - (ii) selecting a current source or a voltage source providing, in response to the pulse from the selected pulse unit, an output signal corresponding to a slope of the section;
  - (c) selecting an integrating unit for superimposing the output signals from each of the selected current or voltage sources for generating an approximated signal response; and
  - (d) creating a model of the electronic device based on the selected pulse units, the selected current or voltage sources and the selected integrating unit; and
  - (III) a measuring unit for measuring the electrical behavior of the electronic device in at least one of the time domain or the frequency domain.

- 16. (canceled)
- 17. (canceled)